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State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF HAZARDOUS WASTE MANAGEMENT

Michele M. Putnam
Deputy Director
Hazardous Waste Operations

John J. Trela, Ph.D., Director

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Deputy Director
Responsible Party Remedial Action

12/18/89
(DATE)

MEMORANDUM

TO: Distribution List

THROUGH: D. Kanjampane P.E., Section Chief
Bureau of Federal/~~State~~ Case Management

FROM: E.G. Kaup P.E., Case Manager
Bureau of Federal/~~State~~ Case Management

CASE: L.E. Carpenter

CASE COMPONENT: R.I.

SUBJECT: Air Monitoring Results for Nov '89
(Back up data to T.C. only)

The attached type of document on the above named facility is for your:

[X] Review and comment

[X] Information and/or file

[ ] Action

[ ] Other

Should you have any questions or if you are unable to meet the due date, please contact me at 3-1455.

Due Date: 1/5/89

Activity Code: EGK-2

Attachment

345983

Distribution:

FYI
ONLY

*Comments received by Case Manager on

[X] B. Dieperan, Geologist, Division of Water Resources _____

[ ] J. Boyce, Technical Coordinator, BEERA/Division of Hazardous Site Mitigation _____

[ ] P. Bross, Regulatory Officer, Division of Regulatory Affairs _____

[ ] _____, Assistant Director, Division of Regulatory Affairs, Enforcement Element

[X] G. Tomaccio, Bureau of Community Relations _____

[ ] _____, Division of Solid Waste _____

[ ] _____, Division of Environmental Quality _____

[ ] J. Joseph, ~~USEPA~~ _____

[ ] _____, DAG _____

[ ] _____ _____

[ ] _____ _____

*Document received from EPA/RP on

Scheduled 11/30/89 Actual 12/15/89

*Response sent to EPA/RP on

*This information is filled out by the Case Manager and a copy of the completed memorandum is forwarded to the Section Chief and MIS.

c. Section Chief (no attachments)
MIS (no attachments)

GEO Engineering

150 Mineral Spring Drive
Dover, New Jersey 07801
201 361-3600 FAX 361-3800

DEC 15 1989

December 12, 1989

New Jersey Department of Environmental Protection
Bureau of Federal Case Management
Division of Hazardous Waste Management
401 East State Street
Trenton, NJ 08625

ATTN: Ed Kaup

SUBJ: Addendum to November 1989
"Report of Remedial Investigation Findings"
November Air Sample Analytical Results
L.E. Carpenter, Wharton, NJ

Dear Ed:

Enclosed are analytical results for November air samples collected at L.E. Carpenter as part of the Remedial Investigation. In accordance with the April 1988 ECRA Sampling Plan for the site, November was the last month for which air sampling and analysis was performed. These results were not included in the November 1989 "Report of Remedial Investigation Findings". A summary and discussion of the November air sample results, which supplements Section 5.5, "Air Sampling Results", of the above mentioned report are presented below. Attached are four summary tables for volatile organics and priority pollutant metals. Two are calculation summary tables which supplement Appendix F and two are summary tables of detected analytical parameters which complete Tables 28 and 29 of the Report. Refer to Section 5.5.1, "General Overview", of the Report for descriptions of sampling locations, explanation of concentration calculations and EPA and OSHA standards.

Analysis of November air samples did not indicate the presence of volatile organic compounds except for benzene at AQ-1, AQ-2 and AQ-4 (refer to Table 28). However, benzene was also detected in the laboratory method blank.

Metal analysis performed on the air samples indicated 5.2 ug/m^3 of zinc at location AQ-3 (refer to Table 29). No other metals were detected at the four locations.

Analysis of air samples in November for volatile organics and priority pollutant metals did not indicate any airborne contamination attributable to the site. The trace concentrations

of benzene detected are most likely due to normal ambient air conditions as affected by nearby traffic. There is no EPA or OSHA standard for zinc.

In view of the November analytical results, we conclude, as stated in the November 1989 report, that the site is having no adverse effect on ambient air quality at or downwind of the site. If you have any questions, please call.

Sincerely,

GEOENGINEERING, INC.

Joseph G. Savarese avm
Joseph G. Savarese
Hydrogeologist

William W. Dunnell IV
William W. Dunnell IV
Project Manager

JGS/WWD/avm
cc R. Hahn
C. Anderson
M. Rodburg

TABLE 28: SUMMARY OF VOLATILE ORGANICS ANALYTICAL TESTING - AIR SAMPLING RESULTS
EPA METHOD 624
L.E. CARPENTER, WHARTON, NEW JERSEY.

GeoEngineering, Inc.
December 1989

SAMPLE ID:	AQ-1-VA		AQ-2-VA		AQ-3-VA		AQ-4-VA		AQ-4-VA Back (VB)	
DATE SAMPLED:	11/01/89		11/01/89		11/01/89		11/01/89		11/01/89	
PARAMETER	Mass (ng)	Conc. ng/m3•	Mass (ng)	Conc. ng/m3•	Mass (ng)	Conc. ng/m3•	Mass (ng)	Conc. ng/m3•	Mass (ng)	Conc. ng/m3•
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1.4 Jp	133.1 p	1.3 Jp	124.6 p	ND	ND	23.0 p	2366.3 p	31.0 p	3189.3 p
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL TARGETED VOLATILE ORGANICS •••	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NON-TARGETED VOLATILE ORGANICS										
Carbon oxide sulfide	ND	ND	51.7	4956.7	94.0	9515.7	89.0	9156.4	86.0	8847.7
Unknown	ND	ND	ND	ND	21.0	2125.9	ND	ND	319.0	32818.9
TOTAL NON-TARGETED VOLATILE ORGANICS	ND	ND	51.7	4956.7	115.0	11641.6	89.0	9156.4	405.0	41666.6

NOTES: ND - Not detected.
p - Compound also found in laboratory blank.
J - Trace concentrations detected below reporting limit or is an estimated concentration.
• - Calculated based on sampling flow rate and reported mass;
refer to Appendix F for supporting documentation.
••• - Total includes compounds detected at trace concentrations (J), excludes compounds found in lab blank (p).

FOOTNOTE: Chain-of-Custody indicated that samples 1-VA thru 4-VB were to be analyzed for VO's; the "B" samples are duplicates of the "A" samples. Since "A" samples were found to have none of the above parameters the duplicate samples ("B" samples) were not analyzed. Although acetone was detected in 1-VA, 3-VA and 4-VA the "B" (duplicate) samples were not analyzed because the laboratory believed the occurance of the acetone was due to field sampling contamination. Acetone was not used during sampling.

TABLE 29: SUMMARY OF PRIORITY POLLUTANT METALS TESTING - AIR SAMPLING RESULTS
L.E. CARPENTER, WHARTON, NEW JERSEY.

GeoEngineering, Inc.
December 1989

SAMPLE ID:	AQ-1H,HA,HB		AQ-2H,HA,HB		AQ-3H,HA,HB		AQ-4H,HA,HB	
DATE SAMPLED:	11/02/89		11/02/89		11/02/89		11/02/89	
PARAMETER	Mass (ug)	Conc.ug/m3*	Mass (ug)	Conc.ug/m3*	Mass (ug)	Conc.ug/m3*	Mass (ug)	Conc.ug/m3*
Antisony	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	ND	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	ND	ND	ND	ND	ND	ND
Lead	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	ND	ND	ND	ND	1.0	5.2	ND	ND

NOTES: ND - Not detected.
* - Calculated based on sampling flow rate and lab reported mass; refer to Appendix F for supporting documentation.

FOOTNOTE: Chain-of-Custody indicated that samples 1HA thru 4HB were to be tested for all Priority Pollutant Metals (except mercury), of the "B" samples were duplicates of the "A" samples. Instead of analyzing the "B" samples as duplicates, the "B" samples were used for detection of Arsenic, Selenium, Thallium, and the "A" samples were analyzed for the remaining Priority Pollutant Metals (except for mercury). Mercury samples were designated as 1H through 4H.

APPENDIX F

CALCULATION SUMMARY TABLE FOR AIR SAMPLES - VOLATILES
L.E. CARPENTER, WHARTON, NEW JERSEY

GeoEngineering, Inc.
December 1989

Month	Sampling Parameter	Location	Flow Rate * (cm3/min)	Volume Pumped (m3)	Reported Mass by lab(ng)	Conc ng/m3
					Benzene	
November	VO	1	21.91	0.01	1.4	133.1
November	VO	2	21.73	0.01	1.3	124.6
November	VO	3	20.58	0.01	--	--
November	VO	4	20.25	0.01	23.0	2366.3
November	VO	4b	20.25	0.01	31.0	3189.3
					Carbon oxide sulfide	
November	VO	1	21.91	0.01	--	--
November	VO	2	21.73	0.01	51.7	4956.7
November	VO	3	20.58	0.01	94.0	9515.7
November	VO	4	20.25	0.01	89.0	9156.4
November	VO	4b	20.25	0.01	86.0	8847.7
					Unknown	
November	VO	1	21.91	0.01	--	--
November	VO	2	21.73	0.01	--	--
November	VO	3	20.58	0.01	21.0	2125.9
November	VO	4	20.25	0.01	--	--
November	VO	4b	20.25	0.01	220.0	22633.7
					Unknown	
November	VO	1	21.91	0.01	--	--
November	VO	2	21.73	0.01	--	--
November	VO	3	20.58	0.01	--	--
November	VO	4	20.25	0.01	--	--
November	VO	4b	20.25	0.01	99.0	10185.2

NOTES * - Flow rate measured in field over 8 hour period.
-- - Not detected.

Volume Pumped(m3) = (Flow rate (cm3/min) * 8 hours * 60 min) .000001

FOOTNOTE: Only those volatile organic compounds detected for a given month were tabulated; volatile orgainic compounds not listed for a given month were not detected.

APPENDIX F

CALCULATION SUMMARY TABLE FOR AIR SAMPLES - METALS
L.E. CARPENTER, WHARTON, NEW JERSEY

GeoEngineering, Inc.
December 1989

Month	Sampling * Parameter	Location	Flow Rate** (cm3/min)	Volume Pumped (m3)	Reported Mass by lab(ug)	Conc ug/m3
					Zinc	
November	Metals	1	399.60	0.19	--	--
November	Metals	2	401.90	0.19	--	--
November	Metals	3	399.40	0.19	1.0	5.2
November	Metals	4	398.70	0.19	--	--

NOTES: * - Includes all metals except mercury. Mercury was not detected in any of the samples.
** - Flow rates as measured in the field over an 8 hour period.
-- - Not detected.

Volume Pumped(m3) = (Flow rate (cm3/min) * 8 hours * 60 min) .000001

FOOTNOTE: Only those metals detected for a given month were tabulated;
metals not listed for a given month were not detected.